VoIP PABX
User Guide

PABX User Guide

Release 1.1 - April 2006

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The above software is licenced under terms which can be found in the Software Licence section of the documentation. Use of the device is subject to the terms therein. If you do not accept those terms then you may return the device unused in it's original packaging for a full refund of the purchase price.

Important Safety Notice

Depending on the power arrangements, it is possible that your VoIP system phone will not work during power outages.

Your system administrator will be able to give your further information about arrangements for access to telephone service during power failures.

It is not safe to assume that your VoIP phone will be available to make emergency calls at all times and you should therefore famailiarise yourself with other means of making emergency telephone calls (e.g. fixed exchange lines and mobile phones) should this be required.

⚠ *EMERGENCY CALLS: the VoIP phone system should not be used as the sole or primary means of summoning assistance in the event of an emergency as power interruptions or other system failure modes could cause it to become unavailable without warning.*

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Document Conventions

Throughout the document, normal text like this indicates procedures required to correctly configure your device.

Critical instructions and helpful configuration tips are highlighted in italics throughout the text.

Critical instructions are formatted like this and preceded by an exclamation mark in a circle. Failing to comply with a critical instruction may cause anomalous behaviour, damage to the PABX or other components, or even result in safety issues.

Configuration tips are formatted like this and highlight necessary steps that need to be performed in certain circumstances. Always take note of these tips as they contain information which can prevent common configuration problems.

Getting Started

We assume for the purposes of this user level manual that your phone system administrator, or installation engineer have setup your VoIP PABX and phones.

If you are also a phone system administrator then you should consult the ipcortex "VoIP PABX Installation & Administration Guide" for details of how to administer the whole system.

As a user, you will normally have been provided with either a physical phone, or a PC based soft-phone which works in conjunction with your PC or PDA and suitable audio hardware.

You should also have been given a username, password and URL to access your own personal user area of the PABX. If you do not have this information then you will need to obtain them if you wish to make any changes to user level settings, or access advanced integration features such as TAPI PC integration.

If you have been provided with a physical phone, then you do not need the above username and password information to make phone calls.

Making Phone Calls Using a Phone Handset

Phone operation does vary between manufacturers and models but basics usage is reasonably intuitive, being quite similar to the way that traditional analogue handsets operate. The key difference is that most digital handsets have the concept of pressing a "dial" key after the whole number has been entered (in a similar way to a modern mobile phone) before the call attempt will be made.

Picking up the handset, dialling the full extension, local, or national number and pressing the button marked "OK", ☑ , or "Dial" is usually sufficient to make an outbound call.

Quick reference cards may have been provided with key information about use of your phone system (templates are attached in the Appendix of this manual).

For information on more advanced features, please see the phone Quick Reference Card or full phone manual

Using the Web Interface

The PABX has a personal web interface for each user which may be used to view phone information and make changes to your user settings and preferences.

Connecting

The web user interface is available from most HTML supporting browsers, including:

- Mozilla Firefox (all versions)
- Microsoft Internet Explorer (5.0+)
- Opera

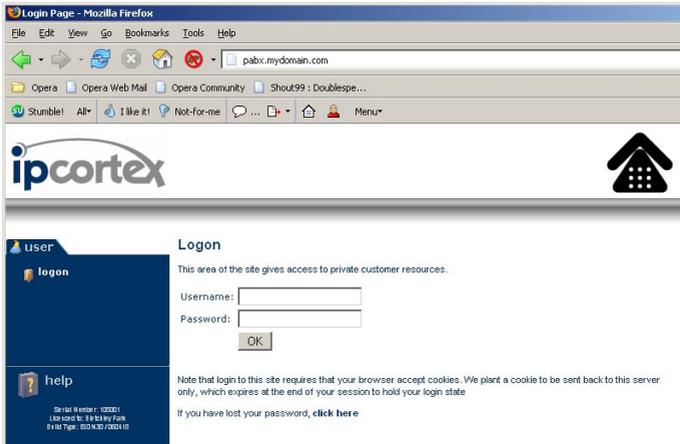Start your preferred browser and enter the URL you have been provided with:

Figure 1: Logon screen

Then enter the username and password you have been allocated and click on the OK button.

Once logged in, unless you are also a PABX administrator, you will see a single tabbed menu to the left oft the screen which allows you to select various options:

As a first step after initial logon, you should select "Change password" from the menu, and set your password to something of your own

choosing.

my calls

This menu allows you to view the most recent calls made through the PABX.

If your PABX administrator has set call cost patterns for some or all of the number prefixes in your recent list then the cost of these calls will also be shown in the list. Where the cost of a call is shown as **unknown**, this simply means a call cost pattern has not been set by the administrator.

my phonebook

This menu displays the whole phonebook that is available to you as a user.

This consists of entries from the following sources:

1. All of the extensions on the system who's entries have been configured to be visible to you (not ex-directory etc).
2. Your personal phonebook entries - see "my details" below for information about how to configure these.
3. System phonebook entries set by the system administrator.

Numbers from all of the above sources are merged and the resultant directory sorted by name as it would be on the phone for display.

my details

This is the main area where general details and preferences may be changed:

Name

Your full name as it appears in the directory and on calls to other users

E-mail Address

The address to which notifications will be delivered for this login.

The e-mail address given here is the one to which voicemail notifications from ordinary extensions and/or faxes from any soft fax extensions will be sent. If this is entered incorrectly then you will never receive these notifications and information may be lost.

Send Email Voicemail Alerts?

If set, and an e-mail address is entered above then an e-mail will be sent to the address whenever a Voicemail is received at your extension.

Attach Voicemail to Alerts?

If set then the above notification will have a copy of the message attached as a WAV file. This may be listened to on a suitably equipped PC or PDA.

Notifications with attached messages will generate large e-mails. Please ensure that your mail system and collection arrangements can cope with the volume and size of messages before enabling this option. Remember to disable it if you are going to be away from your e-mail for a while.

Personal phonebook

Enter names and numbers into empty fields in this area to add new entries into your personal phonebook.

Use for phone buttons - if this is set to **yes** for an entry then the system will attempt to place that entry onto a spare short dial button on your phone. See **my phone** below for details of how to determine which entries have actually been placed onto phone buttons.

my phone

Details about your own extension and physical phone may be viewed and changed from this page.

A number of links are present, which reveal further information about the extension or phone. For security and confidentiality reasons these do not open out when the page is initially displayed. The information can however be seen and changed by clicking on the text.

This area is also where TAPI settings for desktop PC dialling and call integration may be viewed and configured but this is dealt with in more detail in the next section.

Current home extension

Shows the extension number of the main extension owned by you as a user.

Show/Change my PIN number - Clicking on this text displays the PIN used to log in to voicemail for the extension.

When the PIN is displayed, entering a new value into the box and clicking Change will change the PIN to this new number.

Show SIP registration login(s) and password - Clicking on this text displays the SIP registration information for each line on the phone.

You do not normally require this information for a hardware phone which has been set by your administrator to be auto configured by the PABX as the configuration will be pushed to the phone by the system.

If you are using a soft phone or other user configured device to communicate with the PABX, then this is the information you need to give it in order to place and receive calls.

Show TAPI settings - Clicking on this text reveals information required to set up your local PC for TAPI integration if this is enabled on your PABX.

See the next chapter of this document for information about completing TAPI setup on your PC.

Phone line and button mappings

Many phones have the ability to present more than one extension number and have a set of buttons with corresponding indicator lights to show which "line" is ringing or selected for outgoing calls.

Short dial numbers may also be allocated onto some of these buttons on certain kinds of phone. The exact details, number of buttons allocated to extensions and allocated to short dials varies by phone type and system configuration.

This section shows exactly how the extensions and/or short dial buttons have been configured on your phone.

This information can be used to fill out an insert card, or otherwise note which buttons and indicators correspond to which line or function on your phone.

change password

Enter the old password, and new password in the two fields for confirmation, and then click on the change password button.

If you subsequently forget your password then this can be retrieved by using the **lost password** link on the Logon page (provided your e-mail address is correct). If this is not possible then your system administrator will need to reset your password for you.

TAPI Configuration

This is an optional component which may be licenced on your PABX. If it is enabled on your installation you will see the **Show TAPI settings** option on the **my phone** area of your user settings.

Introduction

TAPI is a Microsoft provided interface that allows a PC running Windows 2000 or XP to make or receive phone calls.

Our system provides a TAPI driver which allows Windows applications to control your phone. When correctly deployed and configured, phone calls may be initiated and notifications received about incoming calls via your PC.

This does not affect the way that you actually proceed with calls as your phone rather than the PC is responsible for actually making or receiving the call, but does allow this to be controlled from suitable Windows applications.

The TAPI drivers provide the interface which allows applications to control a phone. How the application uses that interface and presents it's functions to the user is determined by the application.

Requirements

The TAPI drivers operate on Microsoft Windows systems with the following minimum specification:

Windows XP or Windows 2000
TCP/IP LAN connection
50MB free disk space

TCP/IP connectivity is required between the PC and the PABX for TAPI to operate.

Installing the TAPI Drivers

For convenience, the drivers you will need to install on your PC are available for download from your user area of the PABX.

Installation and configuration of the TAPI drivers requires at least one restart of the system. In addition installation may fail if other applications are running at the same time as the installer. For these reasons you should save all data, and close all other applications apart from the web browser before downloading and running the installer.

To download the installer, log on to the PABX using your user login and go to the **my phone** settings screen. Once on that screen, open up the **Show TAPI settings** option by clicking on the text (see previous chapter for details of how to do this).

Next, click on the driver installer download:

Depending on your browser and settings, you may well be warned that the file contains executable code.

Exact details of the following dialogs will differ between browser types and versions, please contact your system adminstrator if you are unsure about how to proceed.

As long as you are sure you are logged on to your own PABX then you can be reasonably sure about the source of the executable and should be safe to run the installer:
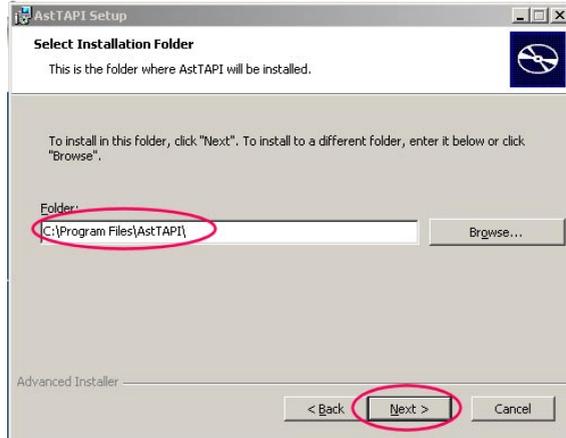
You may also see the following message and, again it should be safe to trust the installer from it's known source.

If the installer is properly started, a screen like the following is displayed:

You will then be prompted to accept the licence agreement and, when accepted, asked to confirm the install location:

Once preparation is complete, the following message will be displayed, prompting final confirmation of install:

Once installation is complete, you will be reminded that a reboot is required to fully install the TAPI drivers:

Clicking OK does not cause a reboot which needs to be carried out manually before the TAPI driver becomes available.

You may wish to delay rebooting your PC until after completing instructions in the next section to configure the application as a reboot is required after reconfiguring the application and it is quite safe to delay the installation reboot at this point

Configuring the TAPI Driver

The TAPI configuration on your PC is associated with a specific phone. After installation, or if you change your phone, the TAPI driver must configured to pair with the correct phone.

To simplify this process, we provide a dynamically generated Windows registry file in my phones - Show TAPI settings. When this file is imported onto your Windows PC, the settings in the TAPI driver are automatically setup for your current phone.

To download this file, simply click on it's description or disk icon on you phone page:


Because this file changes settings on your PC, you will receive several warnings during download and execution of the file. These will depend on your browser and it's configuration, but the following are typical.

The most reliable way of importing the settings is to save the file to hard disk and then import it from there:

Having saved the file to a local folder or the desktop, executing it locally should start the registry editor to import the settings.

When importing the settings, confirmation boxes will be displayed by the registry editor. If you are quite sure that the file you are importing is the same one downloaded from the PABX then it is safe to OK these:
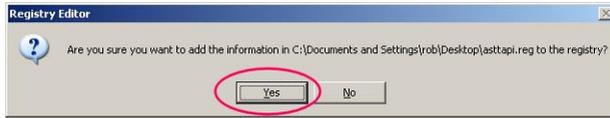
On completion, a message similar to the following will be displayed and indicates that the settings were successfully imported:

You may now need to reboot your PC for the settings to take effect.

Testing the TAPI Interface

Once the settings have been loaded, TAPI may be tested by running any TAPI capable application and dialling a number.

An example of a TAPI application which may be present on many PCs is Microsoft Outlook. The following instructions assume Outlook purely as an example. For other applications, you should consult the documentation provided with the application, or

Whichever program you use, you will need to tell it to use the **ipcortex TAPI** service provider to place calls.

In Outlook select a contact, then right click on "Dial number". The first time you dial a number you can set the correct TAPI dialler by selecting "Dialling Options" from the call menu:
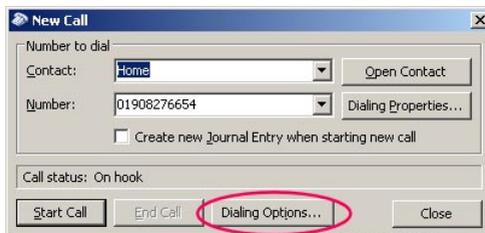
Then select the **ipcortex - Asterisk** line:
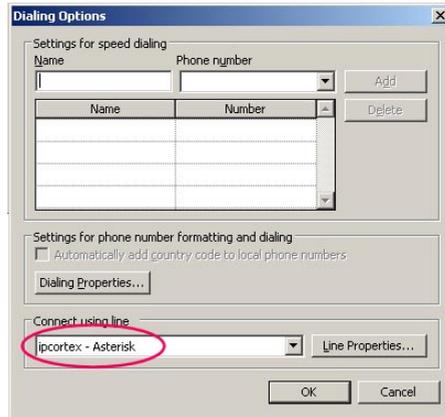
OK the changes, and then click on "Start Call" in the previous dialogue.

Your phone should ring and then, when you pick it up, the far end will start to ring. You can then complete the call and hang in the normal way once complete.

Troubleshooting

If the phone fails to ring when a call is placed, there may be a number of reasons...

Wrong TAPI provider being used

Double check your application is using the TAPI provider (dialler) called **ipcortex - Asterisk**.

TAPI incorrectly configured

Repeat the steps in the previous section entitled: **Configuring the TAPI Driver.**

Wrong phone rings

The TAPI configuration via registry download from your **my phone** area is only appropriate when you wish to allow TAPI to control your main (**owned**) phone. If you wish to control other phones, please contact your system administrator for details.

No network connectivity to PABX

The PC needs to be able to communicate with an application on TCP port 5038 of the PABX. If there is no network connectivity between your PC and the PABX, or a firewall is preventing these connections then TAPI will not be able to operate.

Voicemail

Your PABX system is equipped with a voicemail system and there is a one voicemail box per extension number by default.

When a call is made to your extension and it is either not answered within a period of time determined by your system administrator, or busy because you are on another call then the call will be answered by the voicemail system.

The caller will be promoted to leave a message which you can retrieve either via your phone, the PABX web interface, or e-mail.

Accessing Voicemail

Your system manger should have informed you of your initial voicemail PIN which will be required to access your voicemail account. If you do not have this, you may obtain it from the **my phone** area of your PABX logon (See **Using the Web Interface**).

Your voicemail PIN should be changed to a secure code that you can remember. This can be done from the web interface, or using a phone keypad.

To access voicemail simply dial your internal voicemail number from your internal extension phone.

The default number to access your own voicemail is **8500**, but your administrator may have set this to something different on your system. This voicemail interface "knows" your voicemail box from the extension you are calling on, and will tell you the extension number when you call, and hen ask for your password, or PIN.

There is a second interface to voicemail which does not decide on the mailbox from the calling phone, but instead prompts you for your extension number. This is accessed using 8501 by default, but again, may be something else on your system. This is useful when you wish to check your voicemail whilst at another desk.

With either interface, you should enter your PIN number, followed by the hash (#) key to gain access to your account.

On entry, you will be told how many messages you have and given a range of options.

Configuring Voicemail

Voicemail options are set from within the **mailbox options** sub-menu.

To enter this menu, log in to your mailbox as above, then select:

$\boxed{0}$ **Mailbox options**

Within this menu, the following are available:

$\boxed{1}$ **Record unavailable message** - This is the message which is used when you do not answer a call.

$\boxed{2}$ **Record busy message** - This is the message which is used when you cannot answer a call because you are busy with another caller, or have set Do Not Disturb on your phone.

$\boxed{3}$ **Record name** - The name is used as part of the default greeting if either an unavailable message or busy message have not been recorded.

$\boxed{4}$ **Change password**

$\boxed{*}$ **Return to main menu**

Retrieving Voicemail

Voicemail has the concept of both new and old messages. New messages have not yet been heard, and old messages are ones which have previously been heard but have not been deleted. In addition, you may create a number of sub-folders and save messages to these for future replay.

From the main menu, the following options are used to retrieve and manage messages:

$\boxed{1}$ **New/Old messages** - If you have messages then this prompt will take you to the first message.

$\boxed{2}$ **Change folders** - messages can be saved to alternate folders (see option 9 below). This option allows those folders to be accessed.

$\boxed{*}$ **Return to main menu**

$\boxed{\#}$ **Return to main menu**

Once a message has been listened to, the following additional options are available:

$\boxed{5}$ **Repeat message**

6	**Next message** - move to next available message
7	**Delete message**
8	**Forward** message to someone else
9	**Save** message to a specific folder
*	**Help** - repeat options
#	**Exit**
3	**Advanced** - gives access to the following advanced options:

1	**Reply** - send a reply, if sender was a local extension.
3	**Envelope** - play time, date and sender information about the message, followed by the message.
*	**Return to main menu** - leave the advanced menu

Short Code Features

Built-in short codes on the PABX are:

*0<ext>	Connect directly to voicemail for <ext>, doesn't ring the phone.
**1	Hot desk. Bring my extension here feature.
**2	Hot desk. Release this phone.
**5	Forward calls. Allow calls to ring on an additional extension.
**6	Remove call forwards.
**8	Enable night mode (requires admin pass code)
**9	Disable night mode (requires admin pass code)
*8	Pick-up a ringing phone in your call group.
#01#xx	Record IVR menu message.
#02#xx	Play back IVR menu message.

Phone Quick Reference Cards

The following quick reference cards give basic generic information required to operate a number of types of phone.

They need to be customised with information about your system (for example voicemail number) and will often be superseded by copies provided by your system administrator.

You may make copies of these for your own use in conjunction with the phone system.

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Phone System Quick Reference
(Elmeg IP290/snom 190 phone)

Answering Calls

To answer calls in the normal way simply pick up the handset.

To answer a call hands free using the built in speaker phone, press ⬤ rather than lifting the handset.

Dialling

External numbers

⬤ Enter full external number. Press the ⬤ to delete digits in case of error.

⬤ When complete, press ⬤ to dial.

The number is the normal full local, national, or international number. No prefix (e.g. '9') is required.

Other Extensions by Number

⬤ Enter extension number

⬤ Press ⬤

The handset can be lifted at any time, before or after dialling the number.

If the handset is not lifted then the call will proceed as a hands free call on the built in speaker phone.

Using the Directory

⬤ Press the key under the PhoneBk on screen menu.

⬤ Use the ⬤ and ⬤ keys to move around the directory until the required name is shown

⬤ Press ⬤

Numbers

All Centre extensions are _____ digit numbers starting with a ___

The extension number is normally shown top-centre of the phone display. Press ⬤ to see this if the display has other messages (e.g. missed calls).

All extensions may be called directly from outside by prefixing them with

0_____ _____

e.g. 0____ _____

Ending a Call

Press ⬤ or Return the handset to its cradle

Placing a Call on Hold

⬤ To place a call on Hold, press the ⬤ 'HOLD' key

⬤ To retrieve the call, press the ⬤ key again

Transferring a Call

Unannounced Transfer

Whilst in the call with the third party:

⬤ Either press the key under the **Xfer** menu item or press the ⬤ 'TRANSFER' key

⬤ Dial the destination number

⬤ Press ⬤ and the call will be transferred to the recipient

Announced Transfer

- Press the **R** - 'HOLD' key

- Dial the destination number

- Press **OK** and talk to the recipient

- Hang up, the original call will be transferred to the new recipient

If after calling the intended recipient you decide not to transfer the call, do not hang up but instead press **R** again to retrieve the held call.

Voicemail

Your Own Extension Voicemail

If the orange light next to the **C** button is flashing, and/or "VMail" or "MWI" is shown on the display then you have one or more messages.

To retrieve your messages:

- Press the button under the VMail prompt

  or

  Dial 8500 and press **OK**

- Follow the voice prompts to pick up and delete messages etc.

The Initial password on all mailboxes is _____**.**

For security reasons, you should change this to your own private code when you first log in to voicemail.

To access a mailbox from another extension, dial **8501.** You will then be prompted for the three digit extension number and its password.

The password may be changed (along with other operations like recording your own outgoing announcements) via the "Mailbox Options" (0) sub-menu in the voicemail system.

Accessing from Outside

To access the voicemail system from outside, mobile etc dial:

0_____   _____

Follow the prompts to enter your extension number and password.

Important Notes

The snom system phones require power from a wall socket to operate. You will not be able to make or receive calls on your phone should mains power fail.

The central PABX is however powered by long running backup batteries to maintain service while the power is off.

Calls During Power Outage

Incoming calls to extensions which have lost power will go straight to voicemail. Voicemail may then be picked up from anywhere (see opposite).

Phones in certain locations are powered from the central battery backup supply and should be available for emergency use during brief power outages:

_____

_____

_____

Emergency Calls

Calls to the emergency services (999, 112) may be made in the normal way.

In the event of an emergency during a power outage, one of the above phones may be used to make outgoing calls. Use of a mobile phone, if available, may be a quicker way to obtain help during a power outage without moving from your current

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Phone System Quick Reference
(snom 320/360 phone)

Answering Calls

To answer calls in the normal way simply pick up the handset.

To answer a call hands free using the built in speaker phone, press ✓ rather than lifting the handset.

Dialling

External numbers

❶ Enter full external number. Press the key under the ⬛← symbol to delete digits in case of error.

❷ When complete, press ✓ to dial.

The number is the normal full local, national, or international number. No prefix (e.g. '9') is required.

Other Extensions by Number

❶ Enter extension number

❷ Press ✓

The handset can be lifted at any time, before or after dialling the number.

If the handset is not lifted then the call will proceed as a hands free call on the built in speaker phone.

Using the Directory

❶ Press the 📖 key or the button under the under the 📇 on screen menu symbol.

❷ Use the up or down arrow buttons on the silver directional dial, or the

button under the onscreen arrow keys to move around the directory until the required name is shown

❸ Press ✓

Ending a Call

Press ✖ or return the handset to its cradle

Numbers

All extensions are _____ digit numbers starting with a ___

All extensions may be called directly from outside by prefixing them with

0_____ _____

e.g. 0____ _____

Placing a Call on Hold

❶ To place a call on Hold, press the 📞 'HOLD' key

❷ To retrieve the call, press the 📞 key again

Transferring a Call

Unannounced Transfer

Whilst in the call with the third party:

❶ Press the ⟷ 'TRANSFER' key

❷ Dial the destination number

❸ Press ✓ and the call will be transferred to the recipient

Announced Transfer

If you wish to talk to the recipient before transferring the call:

❶ Press the 📞 - 'HOLD' key

② Dial the destination number

③ Press ☑ and talk to the recipient

④ Hang up, the original call will be transferred to the new recipient

If after calling the intended recipient you decide not to transfer the call, do not hang up but instead press 📞 again to retrieve the held call.

Voicemail

Your Own Extension Voicemail

If the message light is flashing, and/or ✉ is shown on the display then you have one or more messages.

To retrieve your messages:

① Press the button under the ✉ prompt or the ✉ button.

A message summary is displayed

② Press ☑ to connect to the voicemail system

③ Follow the voice prompts to pick up and delete messages etc.

The Initial password on all mailboxes is _____.

For security reasons, you should change this to your own private code when you first log in to voicemail.

To access a mailbox from another extension, dial **8501.** You will then be prompted for the three digit extension number and its password.

The password may be changed (along with other operations like recording your own outgoing announcements) via the "Mailbox Options" (0) sub-menu in the voicemail system.

Accessing from Outside

To access the voicemail system from

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0_____   _____

Follow the prompts to enter your extension number and password.

Important Notes

The snom system phones normally require power from a wall socket to operate. If your phone is powered locally in this way then you will not be able to make or receive calls on your phone should mains power fail.

The central PABX is however powered by long running backup batteries to maintain service while the power is off.

Calls During Power Outage

Incoming calls to extensions which have lost power will go straight to voicemail. Voicemail may then be picked up from anywhere (see opposite).

[Phones in certain locations are powered from the central battery backup supply:

]

[BT Exchange line(s) should be useable during power failure and are available at:

]

Emergency Calls

Calls to the emergency services (999, 112) may be made in the normal way.

In the event of an emergency during a power outage, one of the above phones may be used to make outgoing calls. Use of a mobile phone, if available, may be a quicker way to obtain help during a power outage without moving from your current location.

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